



U. S. Rivers

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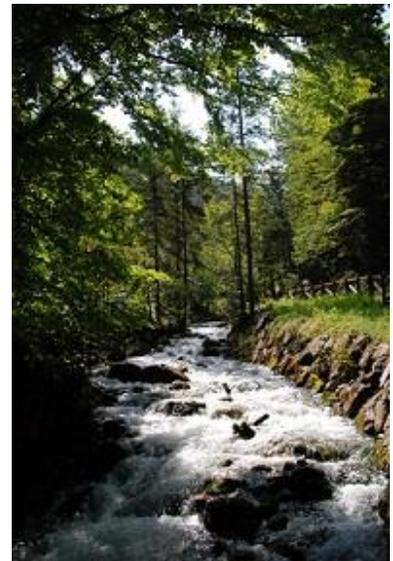
In this article we are going to learn something about the primary rivers in the United States. But first we need to make sure that we all understand basic river terminology.



Brook



Creek



Stream

Do you know the difference between a brook, a creek, a stream, and a river?

Here is an easy way to remember. “Generally, the difference is size: you can step over a brook, jump over a creek, wade across a stream, and swim across a river.”

*****You will see lots of river pictures in the following pages*****

A river is water that flows through a channel (or passage) in the surface of the ground. The passage where the river flows is called the river bed and the earth on each side is called a river bank. A river begins on high ground or in hills or mountains and flows down from the high ground to the lower ground, because of gravity. A river begins as a small brook, creek, or stream, and gets bigger the farther it flows. This is because all primary rivers have many tributaries (other smaller streams and rivers flowing into it).

The start of a river is called the source or head water. The part of the river that is near the source is called a 'young' river. A young river flows quickly downhill over stones, and around big rocks. Young rivers often have lots of small waterfalls and rapids. The source of a river may be a spring, often on a hill, mountain, glacier, or another high place. The source of a river may also be a lake where lots of water from small streams gathers when it rains or snows. The water in a river close to the source is always fresh water and it can usually be drunk safely. Further downstream a lot of rivers become polluted and it is not a good idea to drink the water directly from the river.

The middle part of a river is called a ‘mature’ river. A mature river makes a riverbed that is U-shaped. It might be very deep and run fast. It sweeps over small rocks and boulders, and makes big turns around hills and mountains. It is much wider than a young river, but not as wide as an old river.

A river usually ends by flowing into an ocean, a lake or a bigger river. The place where the river flows out into a bigger body of water is called the 'mouth' of the river. As a river flows towards its mouth, the countryside around the river often changes from hilly to flat land. As it flows over the flat land the river becomes wider and slower. A wide slow river is called an 'old river'. An old river often floods across the land after there is lots of rain at the headwaters.

More river terminology:

Basin (Drainage basin) - The area of land that is drained by a river and its tributaries. The boundary of a river basin is called the watershed.

Canal - An artificial or man-made river channel.

Current - The flow of the river.

Confluence - Where two rivers or streams meet.

Delta - A fan-shaped area of sediment built up at the mouth of a river.

Discharge - The amount of water flowing in a river per second.

Flood - Flooding happens when a river has too much water in its channel. The water breaks through the river banks and spreads over the surrounding land.

Gorge - A gorge is a steep-sided river valley which is very narrow and deep. Most gorges have rocky sides. The river cuts this deep valley by erosion. Gorges are created over thousands of years.

Irrigation - In areas where there is not much rainfall, farmers irrigate the land, by diverting water from rivers to their fields, in channels, ditches or pipes.

Load - What the river carries along with it - mud, sand, rocks, wood, etc.

Rapids - Rapids are fast-flowing stretches of water formed where the river surface breaks up into waves because rocks are near to the surface.

Sediment - The name given to material that has been carried by rivers or the sea and then deposited. Sediment may be called alluvium if it deposited on the bed of a river, it may be called a beach when deposited by waves.

Silt - Tiny pieces of sand or rocks. These are dropped by the river water when the current is slow.

Source - Where the river begins: usually quite high up in the mountains and starts as a small brook, creek, or stream.

Watershed - High ground that surrounds a drainage basin. The boundary of a river basin.

Water table - The water table is the natural level of water in a soil or rock. Below the water table the soil or rock is saturated.

Some River Facts

The U.S. is blessed with more than 250,000 rivers that equates to over 3,500,000 miles of rivers. There are about 70,000 dams on these rivers.

The state with the most rivers is Alaska with about 12,000 rivers running for about 365,000 miles. The lower 48 state with the most rivers is Minnesota with 6,564. Three states claim to have the most river miles - Texas, California, and Nebraska all have about 200,000 miles of rivers.

Just in case you were wondering how many rivers there are in Hawaii, the answer is 360 streams and rivers. However, there are only five navigable rivers - the Waimea, Wailua, and Kalihiwai Rivers on Kauai, the Anahulu River on Oahu, and the Wailuku River on the Big Island. The longest river in Hawaii is the Wailuku River which is about 32 miles long.



Kayaking on the Wailua River on Kauai

Here is a list of the 10 longest rivers in the U.S. - We will discuss them in the order below starting on the next page.

1. Missouri	2,540 miles
2. Mississippi	2,340 miles
3. Yukon	1,980 miles
4. Rio Grande	1,900 miles
5. Arkansas	1,470 miles
6. Colorado	1,450 miles
7. Red	1,360 miles
8. Columbia	1,245 miles
9. Snake	1,080 miles
10. Ohio	980 miles

The Mississippi River (Known today as Ol' Man River)

The Mississippi River is the chief river of the largest drainage system on the North American Continent. Flowing entirely in the United States (although its drainage basin reaches into Canada), it rises in northern Minnesota (Lake Itasca) and meanders slowly southwards for 2,320 miles to the Mississippi River Delta at the Gulf of Mexico. With its many tributaries, the Mississippi's watershed drains all or parts of 31 U.S. states and 2 Canadian provinces between the Rocky and Appalachian Mountains. The Mississippi ranks as the fourth longest and ninth largest river in the world. The river either borders or passes through the states of Minnesota, Wisconsin, Iowa, Illinois, Missouri, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana.



River Facts

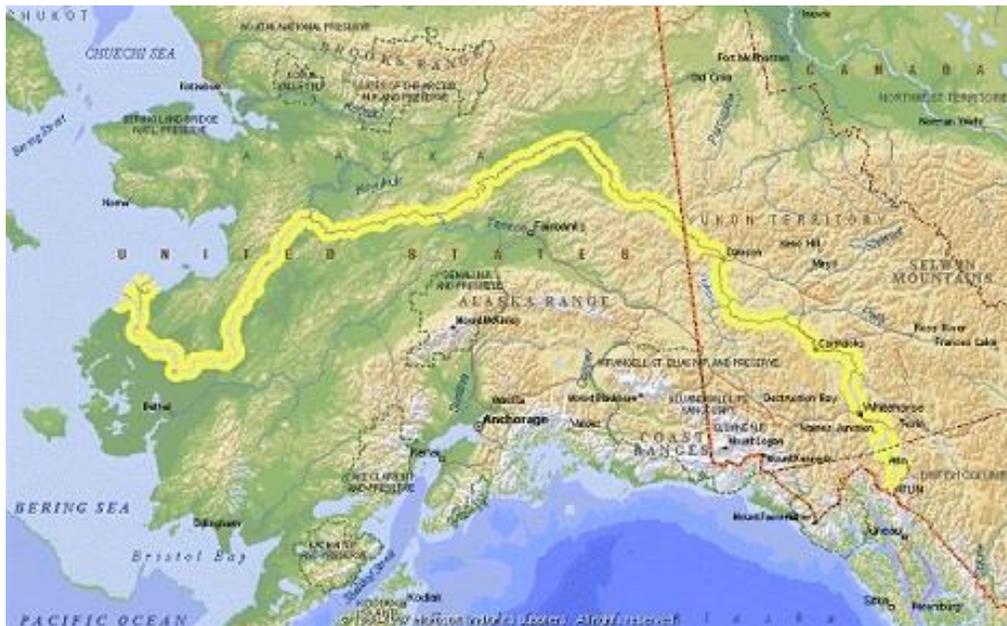
Speed - The average surface speed of the water is near 2 miles per hour. A raindrop falling in Lake Itasca would arrive at the Gulf of Mexico in about 90 days.

Width – Its widest point is just downstream from its confluence with the Missouri River (near Alton, Il.) where it is nearly 1 mile across.

Depth - The river's deepest section is between Governor Nicholls Wharf and Algiers Point in New Orleans where it is 200 feet deep.

Bridges - More than 170 bridges (automobile, foot and railroad) span the Mississippi River.

The Yukon River (Known as the River of No Return)



The Yukon River is a major watercourse of northwestern North America. The source of the river is located at Llewellyn Glacier in British Columbia, Canada. The next portion lies in, and gives its name to, Yukon. The lower half of the river lies in the U.S. state of Alaska. The river is 1,980 miles long and empties into the Bering Sea at the Yukon-Kuskokwim Delta.

The longest river in Alaska and Yukon, it was one of the principal means of transportation during the 1896–1903 Klondike Gold Rush. A portion of the river in Yukon—"The Thirty Mile" section, from Lake Laberge to the Teslin River—is a national heritage river and a unit of Klondike Gold Rush International Historical Park.

The Yukon River is one of the most important salmon-breeding rivers and hosts the largest migrating stocks in the world of Chinook, Chum and Coho Pacific salmon.

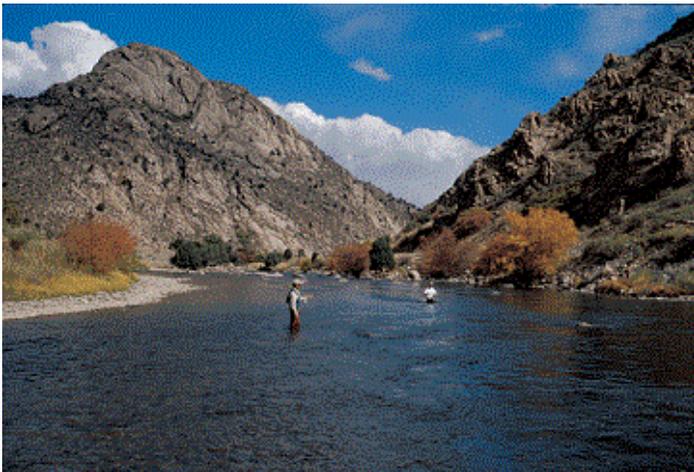
The Rio Grande River (The name "Rio Grande" comes from Spanish that means "Great River")



The Rio Grande is one of the principal rivers in the southwest United States and northern Mexico (the other being the Colorado River). The Rio Grande rises from south-central Colorado in the United States and flows to the Gulf of Mexico. Along the way, it forms part of the Mexico–United States border. According to the International Boundary and Water Commission, its total length is about 1,900 miles, though course shifts occasionally result in length changes. Depending on how it is measured, the Rio Grande is the fourth longest river system in North America. Major tributaries of the Rio Grande include the Rio Conchos, the Rio Chama, and the San Juan River.

The river serves as part of the natural border between Texas and the Mexican states of Chihuahua, Coahuila, Nuevo León, and Tamaulipas. A very short stretch of the river serves as part of the boundary between Texas and New Mexico. Since the mid–20th century, heavy water consumption of farms and cities along with many large diversion dams on the river has left only 20% of its natural discharge to flow to the Gulf. Near the river's mouth, the heavily irrigated lower Rio Grande Valley is an important agricultural region. The Rio Grande is one of 19 Great Waters recognized by America's Great Waters Coalition.

The Arkansas River (Fact: Evidence of the first humans on the Arkansas River dates back 10,000 years)



The Arkansas River is a major tributary of the Mississippi River. The Arkansas generally flows to the east and southeast as it traverses the US states of Colorado, Kansas, Oklahoma, and Arkansas.

At 1,470 miles, it is the fifth-longest river in the U.S., the second-longest tributary in the Mississippi–Missouri system, and the 45th longest river in the world. Its origin is in the Rocky Mountains in Lake County, Colorado, near Leadville. In 1859, placer gold discovered in the Leadville area brought thousands seeking to strike it rich, but the easily recovered placer gold was quickly exhausted. Leadville’s Silver boom in the late 1870’s saw the beginning of train service by the Denver and Rio Grande using the Arkansas River Valley railroad route.

The Arkansas River's mouth is at Napoleon, Arkansas, and its drainage basin covers nearly 170,000 sq. miles. Many Native American tribes including Apache, Ute, Arapahoe, Cheyenne and Kiowa used the river as a migration route.

The Colorado River (Fun Fact: This river is over 5 million years old)



Horse Shoe Bend

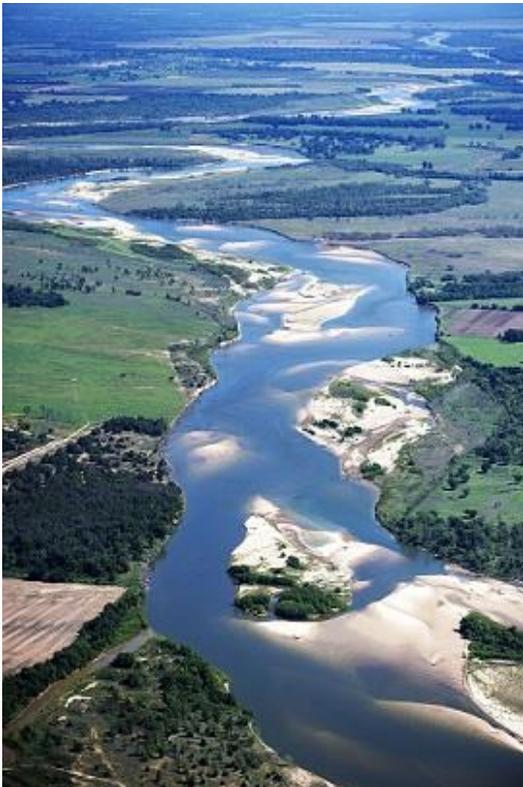


The Colorado River drains an expansive, arid watershed that encompasses parts of seven U.S. and two Mexican states. Starting in the central Rocky Mountains in the U.S., the river flows generally southwest across the Colorado Plateau and through the Grand Canyon before reaching Lake Mead on the Arizona–Nevada border, where it turns south toward the international border. After entering Mexico, the Colorado approaches the large Colorado River Delta at the tip of the Gulf of California between Baja California and Sonora.

Known for its dramatic canyons and whitewater rapids, the Colorado is a vital source of water for agricultural and urban areas in much of the southwestern desert lands of North America. The river and its tributaries are controlled by an extensive system of dams, reservoirs, and aqueducts, which in most years divert its entire flow to furnish irrigation and municipal water supply for almost 40 million people both inside and outside the watershed. This intensive consumption has dried up the lower 100 miles of the river, such that it has reached the sea only a few times since the 1960s.

The Red River (Sometimes called the Red River of the South)

The Red River is a major tributary of the Mississippi and Atchafalaya rivers in the southern United States. The river was named for the red-bed country of its watershed. It is the longest of several rivers named the Red River.



The Red River is the second-largest river basin in the southern Great Plains. It rises in two branches (forks) in the Texas Panhandle and flows east, where it acts as the border between the states of Texas and Oklahoma. It forms a short border between Texas and Arkansas before entering Arkansas, turning south near Fulton and flowing into Louisiana, where it flows into the Atchafalaya River. The Red River provides a rich habitat for species like the blue catfish and the striped bass. Other species of animals found in the area around the river are white-tailed deer, Rio Grande turkey, black-tailed jackrabbit, Texas horned lizard, western diamondback rattlesnake, mourning dove, northern bobwhite quail and the red-headed woodpecker.

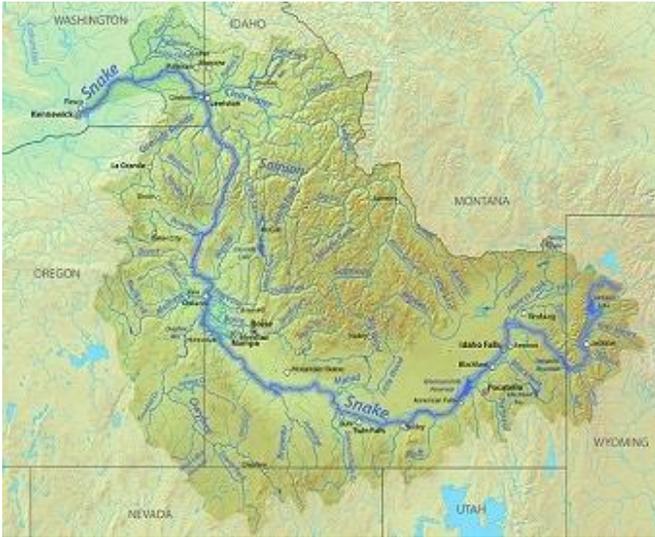
The Columbia River (Fact: Largest dam is the Grand Coulee Dam – 500 feet high)



The Columbia River is the largest river in the Pacific Northwest region of North America. The river rises in the Rocky Mountains of British Columbia, Canada. It flows northwest and then south into the state of Washington, then turns west to form most of the border between Washington and the state of Oregon before emptying into the Pacific Ocean. The river is 1,245 miles long and its largest tributary is the Snake River. Its drainage basin is roughly the size of France and extends into seven US states and a Canadian province.

By volume, the Columbia is the fourth-largest river in the United States; it has the greatest flow of any North American river draining into the Pacific. The river's heavy flow and its relatively steep gradient gives it tremendous potential for the generation of electricity. The 14 hydroelectric dams on the Columbia's main stem and many more on its tributaries produce more than 44% of total U.S. hydroelectric generation - much more hydroelectric power than those of any other North American river. The river system hosts many species of anadromous fish, which migrate between freshwater habitats and the saline Pacific Ocean. These fish—especially the salmon species—provided the core subsistence for native peoples.

The Snake River (Fun Fact: Going down the Snake River in a raft in great fun!)



The Snake River is a major river of the greater Pacific Northwest. At 1,080 miles long, it is the largest tributary of the Columbia River. Rising in western Wyoming, the river flows through the Snake River Plain of southern Idaho, then through the rugged Hells Canyon area via northeastern Oregon and the rolling Palouse Hills, to reach its mouth near the Washington Tri-Cities area, where it enters the Columbia. Its drainage basin encompasses parts of six U.S. states, and its average discharge is over 54,000 cubic feet per second.



Rugged mountains divided by rolling plains characterize the diverse watershed of the Snake River. The Snake River Plain was created by a volcanic hotspot which now lies underneath Yellowstone National Park, where the headwaters of the Snake River arise. Gigantic glacial-

retreat flooding episodes that occurred during the previous Ice Age carved out many topographical features, including various canyons and ridges along the middle and lower Snake River.

More than 11,000 years ago, prehistoric Native Americans lived along the Snake. Salmon from the Pacific Ocean spawned in the millions in the river. These fish were central to the lives of the people along the Snake below Shoshone Falls. By the time Lewis and Clark crossed the Rockies and sighted the valley of a Snake tributary, the Nez Perce and Shoshone were the most powerful peoples in the region. Some tribes adopted use of horses after contact with Europeans, which reshaped their hunting and cultures for the next few hundred years before outside settlement. Later explorers and fur trappers further changed and used the resources of the Snake River basin. At one point, a hand sign made by the Shoshones representing fish was misinterpreted to represent a snake, giving the Snake River its name.

The Ohio River (Fact: There are 20 dams on the Ohio River)



Formed by the merging of the Allegheny and Monongahela rivers at Pittsburgh



Louisville sits at the widest and deepest point (1-mile wide – 132 feet deep)



The Ohio River joins with the Mississippi near Cairo, Indiana

The Ohio River is a major river artery of the east-central United States. Formed by the confluence of the Allegheny and Monongahela rivers at Pittsburgh, it flows northwest out of Pennsylvania, then in a general southwesterly direction to join the Mississippi River at Cairo, Illinois, after a course of 980 miles. It marks several state boundaries: The Ohio–West Virginia, Ohio–Kentucky, Indiana–Kentucky, and Illinois–Kentucky. The Ohio River contributes more water to the Mississippi than does any other tributary and drains an area of 203,900 square miles.

Some Facts:

- The Ohio River is the source of drinking water for more than three million people.
- Over 25 million people, almost 10% of the US population, live in the Ohio River Basin.

The next five longest (largest) rivers in the U.S. are:

- **The Pecos River (Its headwaters are on the western slope of the Sangre de Cristo mountain range in Mora County north of Pecos, NM, at an elevation of over 12,000 feet. The river flows for 925 miles before reaching the Rio Grande near Del Rio, Texas)**



The Pecos River

- **The Brazos River (Headwater source is at the head of Blackwater Draw, Curry County, New Mexico flowing 840 miles to its mouth at the Gulf of Mexico)**
- **The St. Lawrence River (Source stream starts in North River, MN – Flows 745 miles connecting the Great Lakes with the Atlantic Ocean)**
- **The Platte River (Source stream starts in Grizzly Creek, CO - the Platte River is a major river in the state of Nebraska and is about 310 miles long. The Platte River is a tributary of the Missouri River, which itself is a tributary of the Mississippi River which flows to the Gulf of Mexico. The Platte over most of its length is a muddy, broad, shallow, meandering stream with a swampy bottom and many islands)**
- **The Atchafalaya River (Source is the Red and Mississippi rivers in east-central Louisiana where it flows generally south for about 140 miles to Atchafalaya Bay, an inlet of the Gulf of Mexico in southern Louisiana just south of Freeport, Texas)**

Okay, there you have it – the 15 longest, biggest, and best-known rivers in the United States. A few more facts about U.S. rivers and this article will be pau. (For you non-Hawaiians - Pau means “Done or Complete”).

- **The Longest River** Missouri
- **The Biggest and Widest River** Mississippi
- **The Deepest River** Mississippi
- **The Most Scenic** Colorado and Snake
- **The Most Important River** Mississippi
- **River with Best Drinking Water** Yukon
- **Most Polluted River** Ohio



- **River with Best Rafting** Colorado through the Grand Canyon